

# REASSESSING THE IMPACT OF TWO HISTORICAL FLORIDA HURRICANES

BY RUSSELL L. PFOST

The death tolls for two infamous Florida hurricanes in the 1920s are reexamined after a historical search.

Over the course of a career with the National Weather Service, a meteorologist engaged in preparedness activities will quote death and injury statistics from famous storms of years past to emphasize how dangerous these storms are. For example, in a hurricane preparedness seminar, one might mention the fact that over 8000 people were killed in the storm surge during the infamous Galveston, Texas, hurricane of September 1900. However, the accuracy of the death and injury count may, at times, be suspect. This paper reexamines two historic South Florida hurricanes—in 1926 and 1928—which are frequently cited for their disastrous impacts, but for which the casualty figures are likely too low, thus blunting the message of danger conveyed to current residents. The error is compounded by the frequent use of statistics that imply accuracy. The current fa-

tality figure for the 1926 “Miami” hurricane, for example, is 243. No doubt a specific count of victims (if not several counts, in fact) was made following events such as the 1926 storm, but there may be no attempt to include persons who, because they were not white, or for other reasons, were not counted. For reasons we will explore in this paper, an exact count of the dead for both the 1926 and 1928 hurricanes was not possible. The margin of uncertainty is much larger for the 1928 storm, but in both cases there is much more evidence to indicate the number of fatalities is larger than what is now the “official” count than there is to show that the official count is accurate. The question is just how low the current statistics actually are.

**“MIAMI” HURRICANE OF SEPTEMBER 1926.** There are several good accounts (Reardon 1926; Douglas 1958; Mitchell 1926; Will 1990; Barnes 1998) of the devastating hurricane that struck South Florida on 17–18 September 1926, and moved across the state into the northeast Gulf of Mexico, only to make a second landfall between Pensacola and Mobile on 20 September 1926 (Fig. 1). Damages were estimated to be around \$105 million at the time (Fig. 2), which, normalized for population, wealth, and inflation (Pielke and Landsea 1998), would be around \$85–\$90 billion today (C. W. Landsea 2002, personal communication). The total death toll for the

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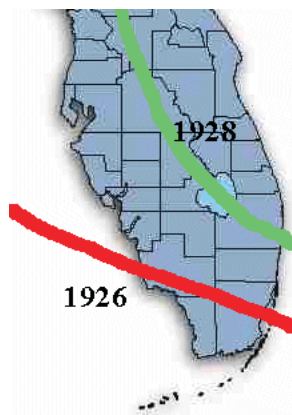
United States currently cited by the National Weather Service (NWS) is 243 (Jarrell et al. 2001), and for all affected areas, including foreign countries, ranges from 264 to 349 (Rappaport and Fernández-Partagás 1995). The exact source of the 243 count is unknown, but probably comes from Mitchell (1926). Charles Mitchell was a U.S. Weather Bureau official who included his account of the storm within a month or two in the *Monthly Weather Review*, which at that time was a publication of the Weather Bureau. It is, therefore, not surprising that his account would become the source for NWS statistics on the hurricane. Tannehill's classic text on past hurricanes (Tannehill 1943) simply states that "more than 100 lives were lost in Miami." However, figures from the Red Cross (Hamm 1926; *Miami Herald*, 10 October 1926; Reardon 1926; Tyler 1926; Will 1990) show 372 dead. This is a very large discrepancy. Reardon's and Tyler's accounts quote "official Red Cross reports, prepared under the supervision of Henry M. Baker, national director of Red Cross disaster relief . . . on October 9, 1926, 21 days after the hurricane . . ." and subdivide the number of dead by community. Hamm's summary and Will's book also quote the Red Cross, presumably from the

same report. Tyler's final death toll was the most detailed, and is reproduced in Table 1.

Tyler's account also provides an earlier "official list of the dead taken by morticians at Miami," and further adds that "the compilation was made, checked, and verified by the Associated Press." In this preliminary list, nonwhite people were denoted by the word "negro" or "colored" after the name. The fact that a racial distinction was made is significant, and it will appear again in context with the 1928 hurricane. This preliminary list includes only 249 names, but that number alone exceeds the count of 243 currently used by the NWS. (Tyler's preliminary list does not include many names of the dead that are included in Will's book for the Lake Okeechobee region.) Significantly, the percentage of nonwhite people in Tyler's list is only 11% for the Miami area (12 out of 105 listed), only 5% for Hollywood,

and none at all for the other areas, including Moore Haven and the Lake Okeechobee region. Best estimates available indicate that from 25% to 50% of the population in Miami was nonwhite around the turn of the twentieth century (Dunn 1997; George 1996). If the percentage had dropped to just half that by 1926 this at least hints that nonwhite casualties may have

been undercounted in the list Tyler cited. It can be speculated that the more affluent white population of South Florida in 1926 may have been more at risk from hurricanes than the nonwhite population for reasons like living in more expensive homes on or near the water, thus being more susceptible to storm surge. Or, perhaps whites were more at risk because of automobile ownership, because Barnes (1998) recounts that a number of fatalities occurred as residents of Miami Beach, who tried to drive back to the mainland during the lull in the eye of the hurricane, were swept into the bay and drowned as the wind and seas returned on the opposite side of the eye. However, such speculation must be balanced by the known fact that nonwhites of that era often lived in substandard housing, which would be very susceptible to hurricane-force winds.



**FIG. 1. Approximate paths of the 1926 "Miami" hurricane and the 1928 "Okeechobee" hurricane.**

**TABLE 1. The 1926 "Miami" Hurricane death toll in Florida.**

Location	Dead	Injured	Families affected
Pompano	0	0	250
Fort Lauderdale	17	1800	4800
Davie (Dania?)*	2	6	85
Hollywood	39	750	1500
Hialeah	26	800	1500
Miami	114	1300	5000
Miami Beach	17	1632	2000
Rural Dade County	5	40	3000
Moore Haven, Clewiston, Lake Okeechobee region	150	50	600
Fort Myers	2	3	149
Pensacola (second landfall)	0	?	?
<b>TOTALS</b>	<b>372</b>	<b>6381</b>	<b>18,884</b>

\*Location referred as Davie in Reardon's account and the *Miami Herald*, but as Dania in Tyler's account.



**FIG. 2. Famous street scene at 12th Avenue and W. Flagler Street, Miami, after the “Miami” Hurricane of 1926 (from the Historical Association of Southern Florida).**

It is not known exactly why the official NWS toll of fatalities does not reflect the various reports cited previously. It is worth noting, however, that the 1926 hurricane had a major economic impact on South Florida beyond the casualties themselves. The storm effectively ended the South Florida development boom of the 1920s. The higher the death toll, the greater the impact, no doubt. Regardless, revision of the NWS death toll for the 1926 hurricane from 243 to the Red Cross figure of 372 would result in that event becoming the eighth deadliest hurricane since 1900 to hit the mainland United States rather than the twelfth (Jarrell et al. 2001). Because of the likely inaccuracies associated with the count of nonwhite deaths in 1926, if not other sociological factors, it is possible (but not provable) that the 1926 hurricane even exceeded the death toll of 408 associated with the 1935 category-5 Florida Keys hurricane, which is now ranked as the fifth deadliest.

### **“OKEECHOBEE” HURRICANE OF SEPTEMBER 1928.**

The Lake Okeechobee region in the 1920s was a new and sparsely populated frontier. Only within 10 years or so had the Everglades region near the lake been drained to expose the fertile black muck soil for

agriculture. Many Bahamian blacks and other nonwhite persons had come or were brought to the Lake Okeechobee region to live and provide field labor. The lake itself, a large but very shallow lake on average less than 15 ft deep, was partially surrounded by a levee from 5 to 9 ft above the ground (Will 1990).

This hurricane moved ashore in Palm Beach County (Fig. 1) on the evening of 16 September 1928, only two years after the 1926 hurricane had devastated Miami. Damages from this hurricane were estimated around \$25 million (Fig. 3), which, normalized for population, wealth, and inflation, would be around \$16 billion today (C. W. Landsea 2002, personal communication). It passed over the eastern shore of

Lake Okeechobee, causing a horrible flood in the towns of Pahokee, Canal Point, Chosen, Belle Glade, and South Bay. Many people were lost in the floodwaters, probably three-quarters or more of whom were nonwhite field workers (Fig. 4).

Memorial services, one white, one nonwhite, were held at the same time but at different locations on Sunday, 30 September 1928, in West Palm Beach. The *Miami Herald* article (*Miami Herald*, 1 October 1928) on the memorial services reported nearly 1000 victims of the hurricane disaster, 674 of whom were nonwhite



**FIG. 3. Street scene in West Palm Beach after the “Okeechobee” Hurricane of 1928 (from *Palm Beach Hurricane—92 Views*, 1928, American Autochrome Company, Chicago, IL).**



(Fig. 5). Additional *Miami Daily News* articles stated a death toll of 2200 (*Miami Daily News*, 24 September 1928) and 2300 (*Miami Daily News*, 25 September 1928), along with the observation that only the death toll in the Galveston hurricane of 1900 was higher. In Will's book, which seems to have the best detail on the 1928 hurricane of any source available, the estimated death toll was at first set at 2300 but later lowered to 1770.

Will quotes the final Red Cross report in 1929 as stating that 1810 people were killed and 1849 were injured in the 1928 hurricane. But Will also quoted a news release from the Florida State Board of Health on 7 December 1928, which estimated the deaths in Palm Beach County alone at 1833. The following is an excerpt from Will's book:

The exact number of those who perished in the Okeechobee storm can never be ascertained. Probably three-fourths or more of the casualties were negroes, many of whom had come from the Bahama Islands. Accounting for members of this race was complicated by the migratory habits of their kind and the fact that most of them were known, even to their friends, only by a nickname. Another reason the number cannot be ascertained was that many were carried by the flood far into the sawgrass wastes.

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The NWS has long listed the Okeechobee Hurricane of 1928's death toll as 1836, making it the second worst hurricane death toll since 1900. No doubt use of this figure by the NWS dates to Mitchell (1928), who quoted a Red Cross official casualty estimate dated 28 October 28 1928. Dunn and Miller (1960) also quote the Red Cross figure.

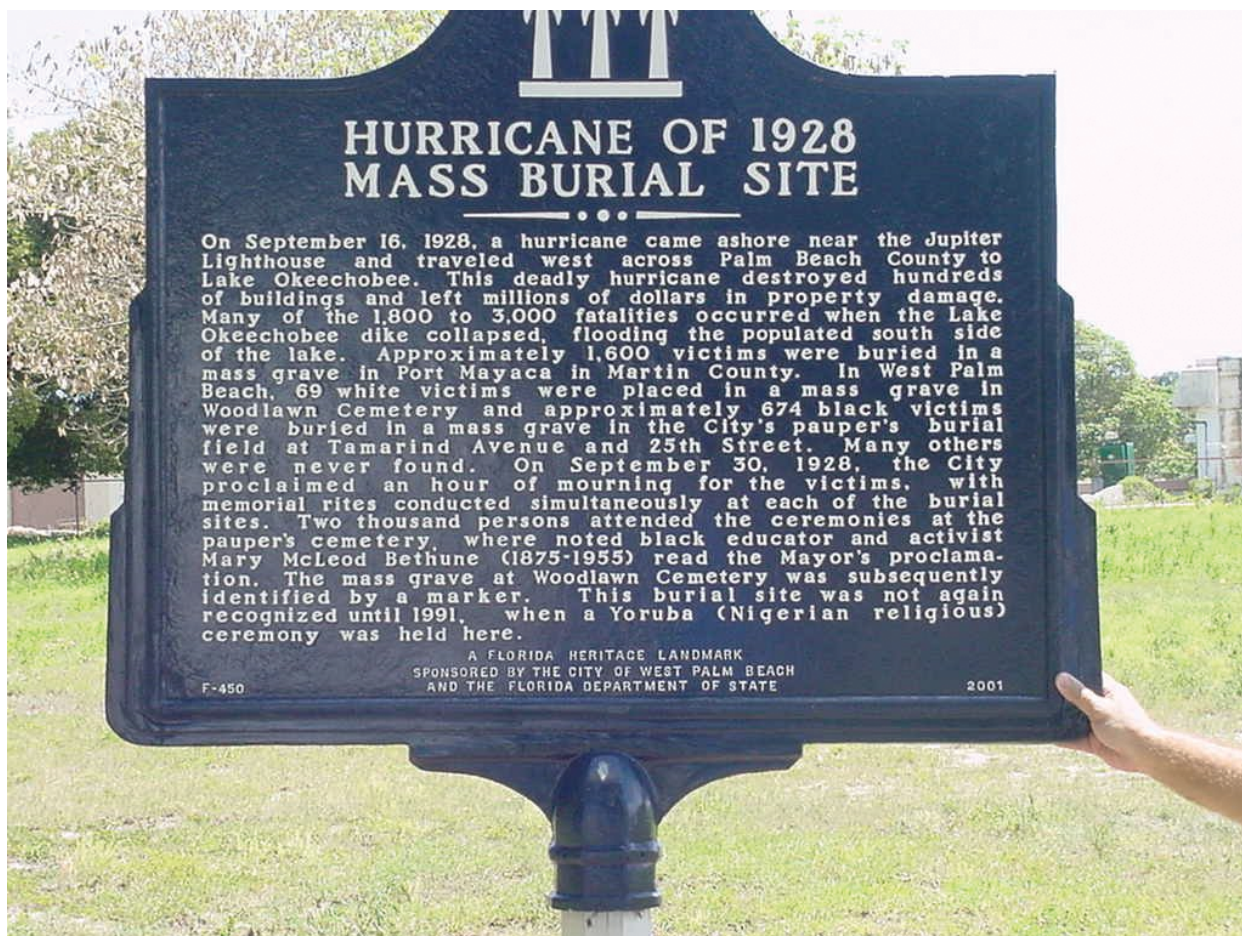
Why were there so many estimates of the death toll immediately after the 1928 hurricane? Mitchell's account provides a glimpse into the attitudes of the past that is quite revealing:

The information that the storm would likely pass inland near Jupiter, moving northwestward (toward Okeechobee) was telephoned to the lake region by this office [i.e., the U.S. Weather Bureau office in Miami] and by Miami firms having interests along the south shore of the lake. Mr. Frank Schuster, who was located at South Bay, near Belle Glade, visited this office several days after the storm and stated that he had warning in sufficient time to enable him to make many automobile trips in the vicinity of South Bay for the purpose of collecting the white residents and moving them to a large barge. With the assistance of other men, he saved the lives of 211 men, women, and children.

We have no idea what other evacuation efforts may have taken place, but the above certainly implies less concern by employers, if not others, for the welfare of non-whites. We might also infer less concern to recover, bury, and count nonwhite bodies after the storm. In addition, water covered the region for weeks after the storm. A supreme effort would have had to have been made to search for more bodies. Will, in fact, states that the search for bodies ended on 1 November, not because there weren't more bodies, but because there was no more money appropriated for the task.



**FIG. 4. Famous picture of the cemetery detail of the Okeechobee flood at Belle Glade caused by the “Okeechobee” hurricane of 1928 (from *Palm Beach Hurricane—92 Views*, 1928, American Autochrome Company, Chicago, IL).**



**FIG. 5.** State of Florida historical marker at the site of the mass burial of approximately 674 victims of the 1928 “Okeechobee” Hurricane, Tamarind Avenue and 25th Street, West Palm Beach.

Probably the truest summation of the death toll from this storm and its uncertainties can be found in the book *Killer ‘Cane* (Mykle 2002). Although this book appears to be partly historical fiction, the author makes a poignant observation that, “a simple summation of the reported number of people buried . . . totals more than 2400,” (such a summation is included in Table 2) and he concludes “the true figure is more likely close to three thousand.” He also states “the local officials worked hard to keep the death toll as low as possible . . . so as not to scare away tourists and to help return to boom years when everyone was making money.”

Eliot Kleinberg (2002, personal communication) researched the 1928 “Okeechobee Hurricane” extensively and wrote concerning Will (who came to the region in 1913 and owned a garage in Belle Glade at the time of the hurricane):

Will wrote the state board of Health and the Red Cross in 1958, saying he had always accepted a fig-

ure of 2,500. Will said the mayor of Belle Glade at the time had told him 1,850 bodies had been taken from Belle Glade alone. There’s nothing in Will’s files to indicate a response.

Although Will acknowledged the “final” Red Cross count of slightly over 1800, he experienced first hand that terrible event. He presumably was well aware of sociological and economic factors in play at the time

**TABLE 2.** Summation of 1928 “Okeechobee” Hurricane death toll in Florida from markers.

Location	Death count
Woodlawn Cemetery, West Palm Beach	69
Mass gravesite, Tamarind Avenue and 25th St., West Palm Beach	674
Port Mayaca Cemetery, Port Mayaca	1600
<b>TOTALS from markers</b>	<b>2343</b>



and he seems to have had good reason to assume many more fatalities actually occurred. His recommendation for using the figure of 2500 killed therefore seems the logical and more accurate course to follow. But even that number should be marked by an asterisk in consideration of the apparently large number of missing or unaccounted for people, mostly nonwhite, from that horrible night.

**CONCLUSIONS.** In part the absent, late, and/or inaccurate counting of nonwhite persons reflected attitudes and prejudices of the time, but in addition—especially in regard to the 1928 Okeechobee hurricane—the difficulty in finding and recovering bodies was significant. Also, the desire of the survivors to return to normal and recover financially in the aftermath of two disastrous storms in just two years cannot be discounted as a factor contributing to reaching “closure” quickly, and in the process, making a limited effort to verify the death toll.

On the basis of this reassessment it seems reasonable now that the death tolls for these two historic Florida storms should be adjusted as soon as possible. It is recommended that the “Miami” hurricane of 1926 be increased from 243 to 372 dead, and the “Okeechobee” hurricane of 1928 be raised from 1836 to 2500 (with an asterisk denoting it could be as high as 3000). This will improve the integrity and accuracy of statistics maintained by the National Weather Service that are used as part of severe weather and hurricane preparedness programs.

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